Early Number

How we teach the children mathematical concepts

How to support your children at home

Top tips and takeaways

Early Learning Goals

ELG: Number

Children at the expected level of development will:

- Have a deep understanding of numbers to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Early Learning Goals

ELG: Numerical Patterns

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Maths at Coombe Hill

At Coombe Hill Infants we use The NCETM's (The National Centre for Excellence in the Teaching of Mathematics) Mastering Number programme to build a strong foundation in early mathematics by developing children's number sense, mental fluency, and confidence. It focuses on core skills like understanding number composition and decomposition, subitising, and recalling number facts, using daily, structured sessions with hands-on tools like the rekenrek.

The 5 Counting Principles

One-One Principle - Children count each object only one and say one number name for each object.

Stable Order Principle - When children count, they say the number names in order and know that this order will not change.

Cardinal Principle - Children know that when they count a group of objects, the last number that they say tells them the total for the group.

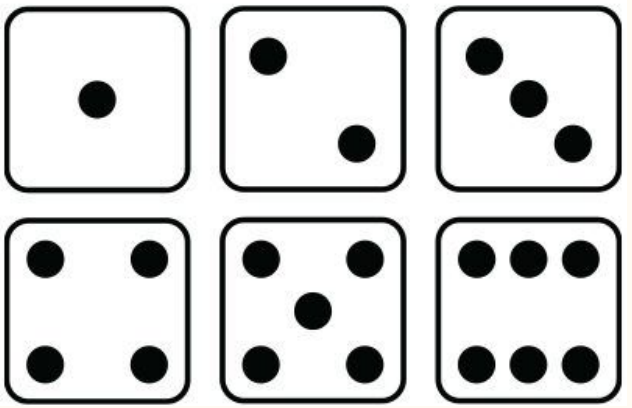
Abstraction Principle - Children understand that they can count anything, even things that cannot be touched or seen, such as a sound or a thought.

Order-Irrelevance Principle - Children understand that a group of objects can be counted in any order and the total will stay the same.

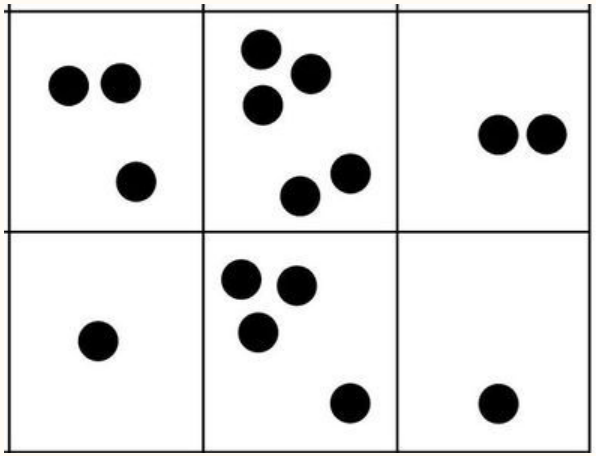
Counting at home

- Have a range of small objects for them to count
- Build towers
- Listen to counting songs and rhymes
- Count actions/sounds/body movements/ball bounces
- Encourage them to line up objects and touch each as they count them
- Count objects incorrectly and see if your child can spot what you've done wrong
- Ask your child, 'How many are there?'

Subitising



Subitising is recognising how many things are in a group without having to count them one by one. Children need opportunities to see regular arrangements of small quantities, e.g. a dice face, structured manipulatives, etc., and be encouraged to say the quantity represented.



Children also need opportunities to recognise small amounts (up to five) when they are not in the ‘regular’ arrangement, e.g. small handfuls of objects.

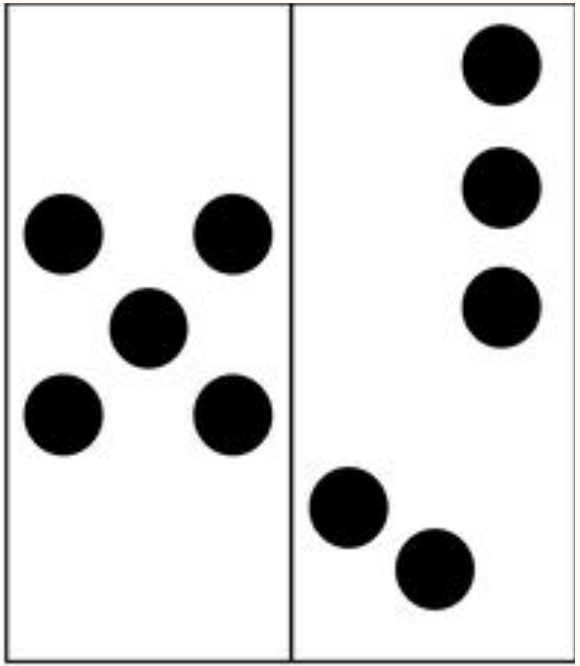
Subitising

What number can you see here?

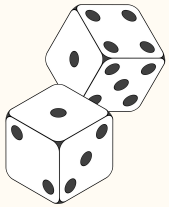
How do you know it's this number?

What numbers can you see hidden?

"___ and ___ make 5"



Supporting subitising



Using dot cards, dominoes and dice as part of a game, including irregularly arranged dots (e.g. stuck on)

Playing hidden objects games where objects are revealed for a few seconds, for example, small toys hidden under a bowl – shuffle them, lift the bowl briefly and ask how many there were

'All at once fingers' – e.g. show me four fingers. Show me 4 fingers a different way... and another...and another

Representing Numbers

It is important that children understand that numbers can be represented in different ways.

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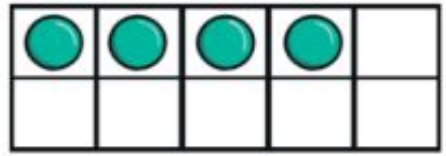

Patterns and Connections

Patterns are central to maths and children have an instinctive idea of patterns. Research shows that children's ability to see patterns forms the basis of early mathematical thinking. Learning about patterns and connections will help children to make their own predictions and form logical connections. It's an important foundation for later mathematical thinking and reasoning.

Patterns and Connections

Pattern

Looking for and finding patterns helps children notice and understand mathematical relationships

Shape and Space

Understanding what happens when shapes move, or combine with other shapes, helps develop wider mathematical thinking

Measures

Comparing different aspects such as length, weight and volume, as a preliminary to using units to compare later

Positive Parental Attitudes